

ABSTRACT

A current direction detection circuit is provided that is of small circuit scale yet is capable of suppressing power loss of a switching regulator. This current direction detection circuit 16 includes a monitoring transistor 20 having a control terminal and an output terminal respectively connected with a control terminal and an output terminal of an earth side output transistor 12, an impedance element 21 having one terminal connected with an input terminal of the monitoring transistor 20 and the other terminal earthed, first and second constant-current sources 22, 23, a diode-connected reference transistor 24 interposed between the first constant-current source 22 and earth potential, and a sensing transistor 25 interposed between the second constant-current source 23 and impedance element 21 and having a control terminal connected with the control terminal of the reference transistor 24.